# D&T Subject Leader Development Meeting

Primary STEM
Education Consultancy

Led by Naomi Hiscock, Director

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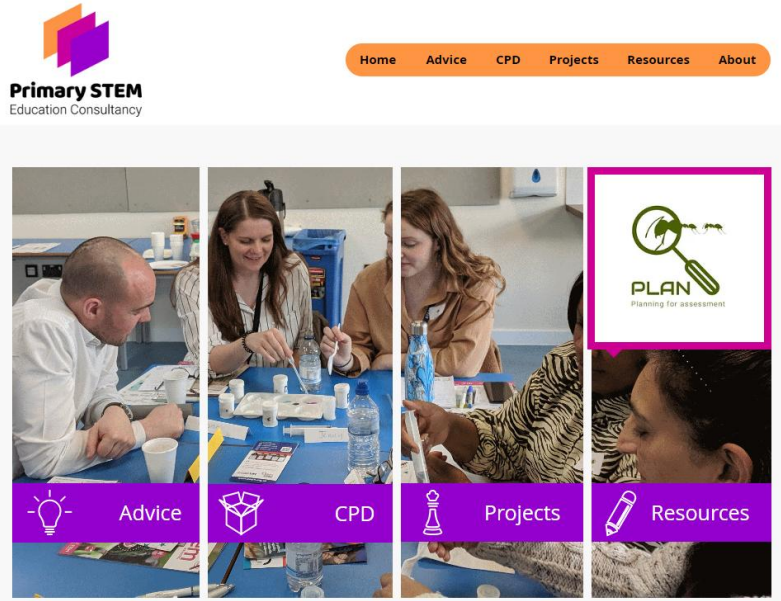
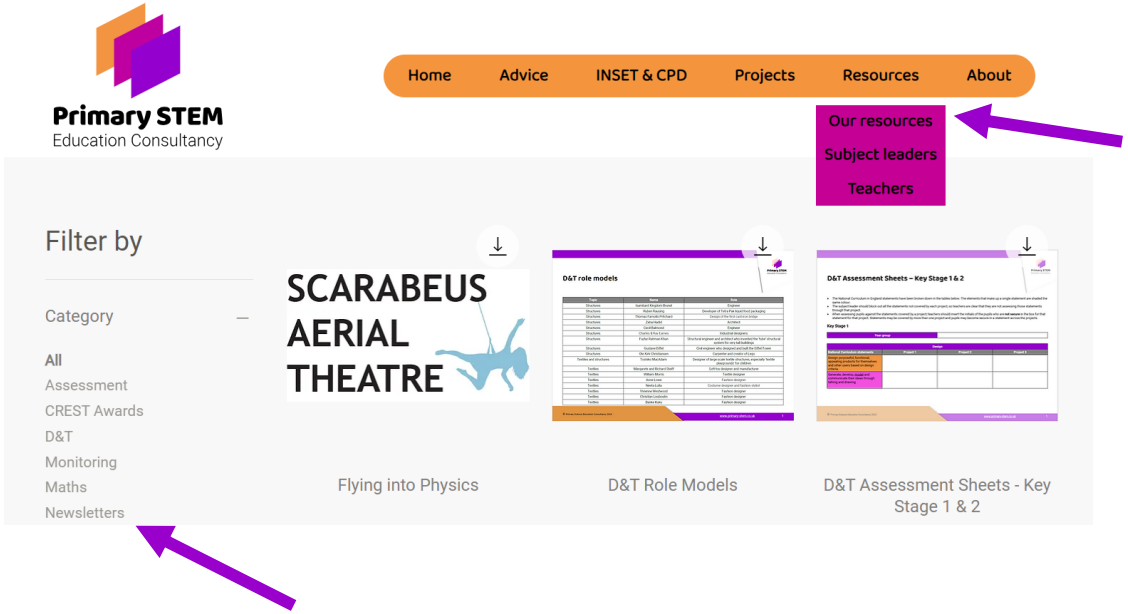
# Introductions

## Director




## Sign up to our newsletter






09/10/2025



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# Introductions

## Primary Ambassador

## Regional Support Organisation

# Agenda

- Subject updates
- Self-assessment of D&T
- Curriculum design
- Making prototypes

# Subject updates

# Engage Grants

- Engage Grants are for eligible schools to run CREST Awards. There are two types of grant:
  - **Engage Grants**
    £350 of grant money, which can be spent on equipment, teacher cover etc., plus £350-worth of CREST Awards
  - **Engage Simply CREST.**
    £350-worth of CREST Awards
- The deadline for applications is 14 October. To find out more and apply, visit the CREST Awards website.

# Partnership Grants

- The Royal Society's Partnership Grants scheme funds schools and colleges up to £3,000 to work in partnership with STEM professionals from academia or industry to run an investigative STEM project. The grant scheme is open to all levels of education supporting pupils aged between 5 and 18.
- The grant work can provide an opportunity for students to develop key skills which will be invaluable for their future careers, demonstrate the range of STEM careers available, and can foster long-term working relationships between the school/college and STEM professionals.
- The deadline for applications is 1 December.
- To find out more and apply, visit The Royal Society's website.

# New CREST early years and primary challenges

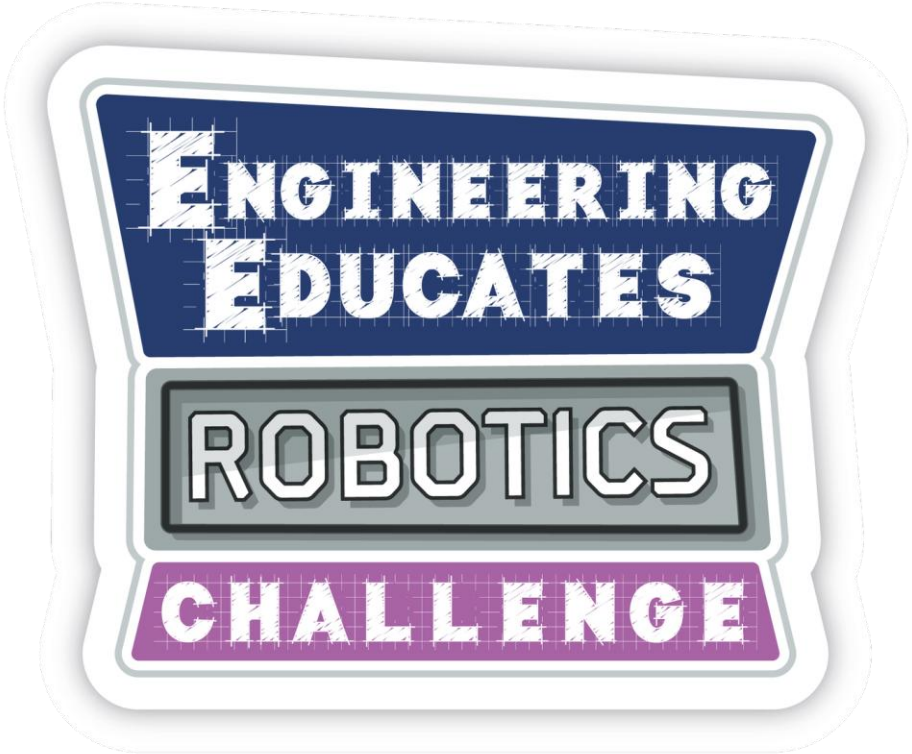
- This new collection includes 8 CREST Star challenges that have been adapted to be more accessible, making them suitable for children aged 3-7, or those working at this level.
- They come with accompanying demonstration videos and supporting slides for the classroom to help introduce the story scenarios and activities to non-readers.
- Editable versions of the Organiser and Activity Cards are also available, so the challenges can be easily adapted for individual learning needs.
- To download the new collection, visit the CREST Awards website.

# New challenges

Engineering Educates have published two new robotics challenges that use real-world contexts and are fully curriculum-linked. They are:

- ‘The Sky’s The Limit’ where pupils design a launch system, glider or landing system
- ‘Pipe Pioneers’ where pupils design and prototype a robot capable of working in underground extreme environments.

To find our more and download the resources, visit the Engineering Educates website.



# Could your students help choose the winner of the Young People's Book Prize 2025?

- School judging panel applications are now open for The Royal Society's Young People's Book Prize 2025.
- The prize aims to promote literacy in young people and inspire them to read about science. It also supports the writing of excellent, accessible STEM books for under-14s.
- Successful schools will receive a set of 6 science books for free, along with a judging guidance pack including book review posters and guidance, stickers and bookmarks.
- Priority for judging panel places will be given to schools new to the prize, and then on a first-come, first-served basis. In the event that they reach capacity early, the application form may close before the application deadline on 30 September 2025.
- To apply, visit The Royal Society website.

# Space competitions, challenges and activities

- Every year, the European Space Agency and ESERO-UK run school projects, funded by the UK Space Agency, that engage pupils in multi-disciplinary activities, just like in the real world of space missions. Through these projects, pupils can expand their knowledge of STEM subjects and develop new skills and competences.
- By participating in Climate Detectives, Mission X, Moon Camp and AstroPi, your pupils can learn about Earth's environment, train like astronauts, design a habitat in space, or write code that will be run by computers onboard the International Space Station.
- All the challenges launch in September for the 2025/26 school year. To find out more and sign up for your pupils to participate, visit the ESERO-UK website.

# Protecting Our Planet Day 2025

- STEM Learning organises this live-streamed event for schools each year which brings climate change pioneers and leading researchers, inspiration and activities into the classroom.
- This year it takes place on 27 November.
- To find our more and register your interest in participating, visit the STEM Learning website.

# Ada Lovelace Day webinar – 14 October, 9–9.45am

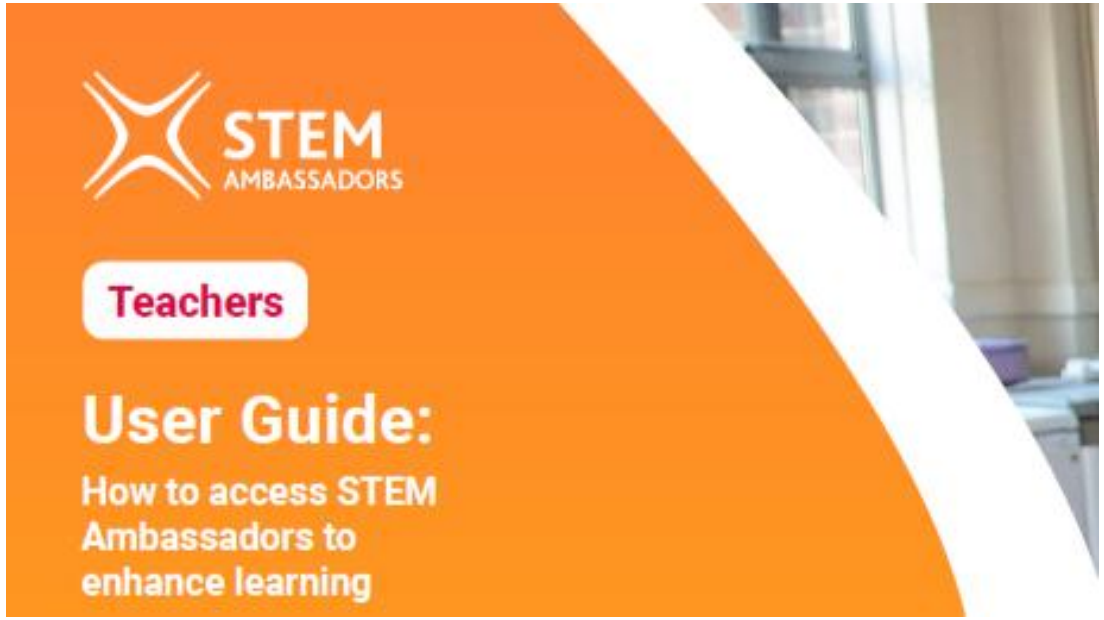
- Celebrate Ada Lovelace Day 2025 with a free 45-minute webinar in which your KS2 pupils will have the chance to meet three incredible female role-models working in a range of tech-related roles.
- Your pupils will find out what these STEM Ambassador do day-to-day, what skills they use, and how they use computing to improve our lives.
- To find out more and book for your pupils to participate, visit the Eventbrite page.

# New STEM Ambassador user guide

The new user guide for teachers provides information about:

- who STEM Ambassadors are
- the impact STEM Ambassadors can have in schools
- different ways to connect with STEM Ambassadors to support your students
- key information if you need support
- what teachers say.

To download the user guide, visit the STEM Learning LinkedIn page.



# New STEM Learning resources website

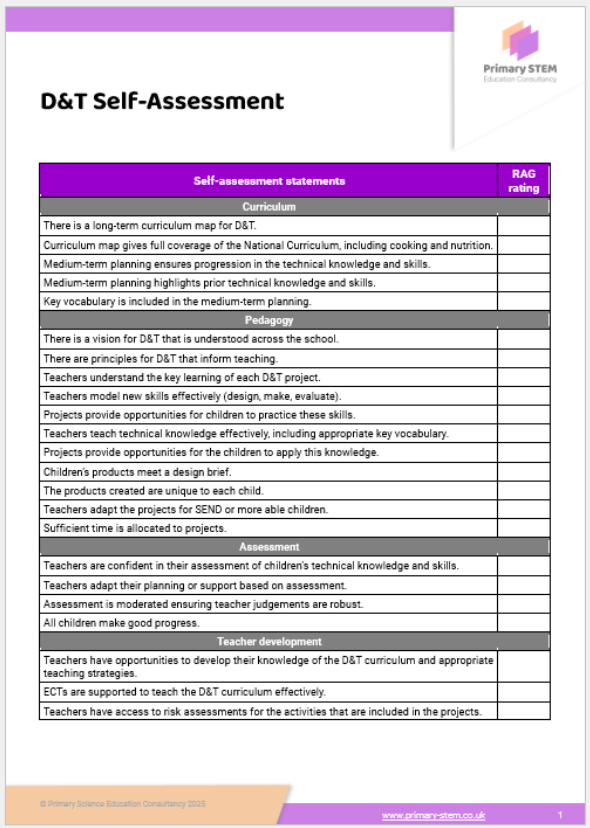
The STEM Learning resources website houses a collection of over 14,000 freely available, quality-assured STEM education resources to help educators inspire young people about STEM. STEM Learning has updated the website by:

- adding a new and more powerful search to help you explore the collections in full
- refreshing the brand and style, with improved accessibility and format
- adding Explorify.

To visit the new resources website, visit the STEM Learning website.

# Subject review

# Self-assessment



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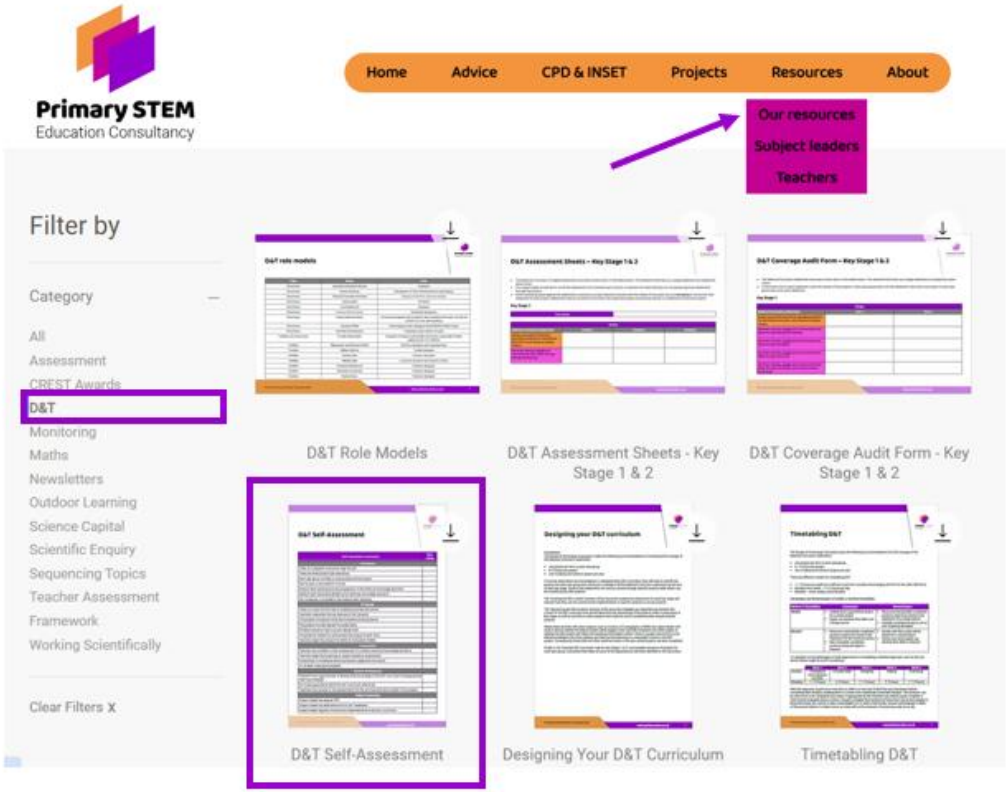
## D&T Self-Assessment

| Self-assessment statements | RAG rating |
|---|---|
| **Curriculum** | |
| There is a long-term curriculum map for D&T. | |
| Curriculum map gives full coverage of the National Curriculum, including cooking and nutrition. | |
| Medium-term planning ensures progression in the technical knowledge and skills. | |
| Medium-term planning highlights prior technical knowledge and skills. | |
| Key vocabulary is included in the medium-term planning. | |
| **Pedagogy** | |
| There is a vision for D&T that is understood across the school. | |
| There are principles for D&T that inform teaching. | |
| Teachers understand the key learning of each D&T project. | |
| Teachers model new skills effectively (design, make, evaluate). | |
| Projects provide opportunities for children to practice these skills. | |
| Teachers teach technical knowledge effectively, including appropriate key vocabulary. | |
| Projects provide opportunities for the children to apply this knowledge. | |
| Children's products meet a design brief. | |
| The products created are unique to each child. | |
| Teachers adapt the projects for SEND or more able children. | |
| Sufficient time is allocated to projects. | |
| **Assessment** | |
| Teachers are confident in their assessment of children's technical knowledge and skills. | |
| Teachers adapt their planning or support based on assessment. | |
| Assessment is moderated ensuring teacher judgements are robust. | |
| All children make good progress. | |
| **Teacher development** | |
| Teachers have opportunities to develop their knowledge of the D&T curriculum and appropriate teaching strategies. | |
| ECTs are supported to teach the D&T curriculum effectively. | |
| Teachers have access to risk assessments for the activities that are included in the projects. | |







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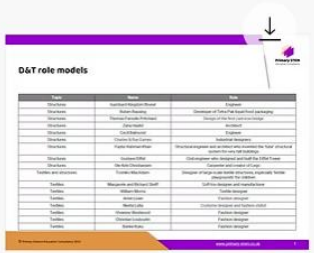
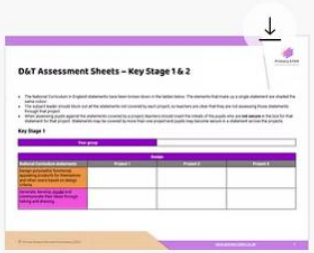
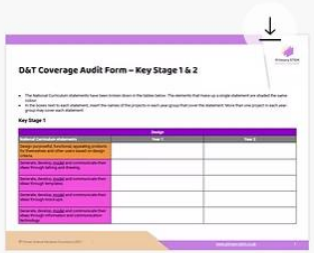



D&T Role Models



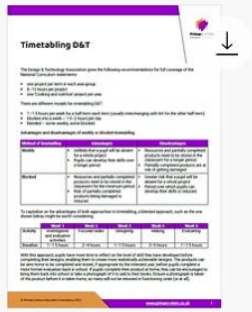

D&T Assessment Sheets - Key Stage 1 & 2




D&T Coverage Audit Form - Key Stage 1 & 2


D&T Self-Assessment


Designing Your D&T Curriculum




Timetabling D&T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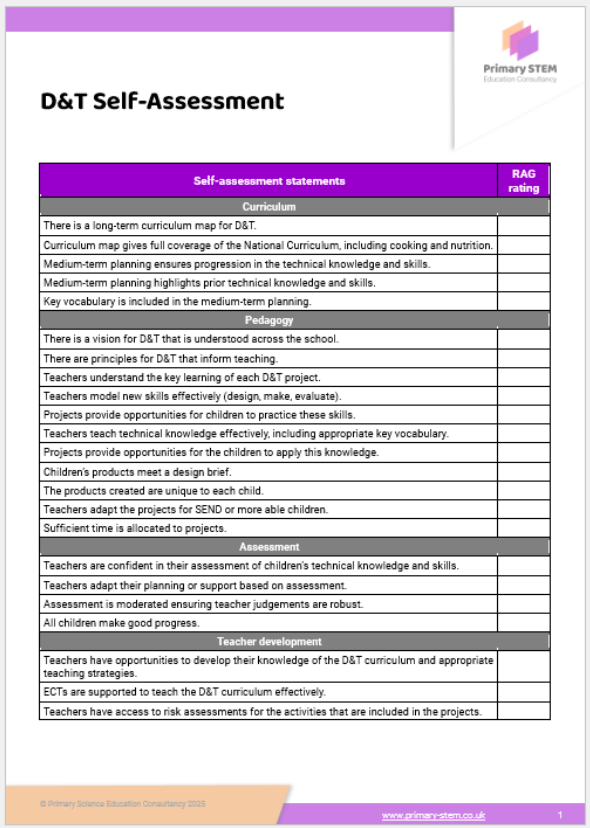
# Sharing practice

- Curriculum
- **Pedagogy**
- **Assessment**
- **Teacher development**
- **Subject leadership**
- **Practical resources**
- **Profile**

- **Group A**
  Move to the table of an area that you can share what your school currently does.
- **Group B**
  Move to the table of an area that you are thinking of developing this year.

# Self assessment – action planning



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- Identify some development targets.
- Jot down potential actions for the year.
- Share and reflect on these.

- Take a photograph/save the document for reflection at the end of the year.

# Curriculum design

# Curriculum design – essential

- Mapping the National Curriculum statements to year-groups to ensure full coverage
- Allocating statements to projects within each year-group ensuring good sequencing
- How can you demonstrate this to stakeholders and external bodies?

# Curriculum design – desirable

- Key vocabulary
- Resources
- Adaptions for accessibility
- Diversity for inclusion

# Curriculum design – reflection and sharing

**Essential**

- Mapping the National Curriculum statements to year-groups to ensure full coverage
- Allocating statements to projects within each year-group ensuring good sequencing
- How can you demonstrate this to stakeholders and external bodies?

**Desirable**

- Key vocabulary
- Resources
- Adaptions for accessibility
- Diversity for inclusion

# Ensuring progression

- Review the National Curriculum.
- Identify:
  - substantive knowledge – technical knowledge
  - disciplinary knowledge – practical skills.
- To ensure progression, teachers need to know the sequence of learning in each aspect of the two types of knowledge (threads) in order to be building on prior learning.

# Identify threads

- Looking at the National Curriculum and/or your long-term curriculum map, identify possible threads.
- Look for technical knowledge or practical skills that are being developed across the year-groups and between projects.

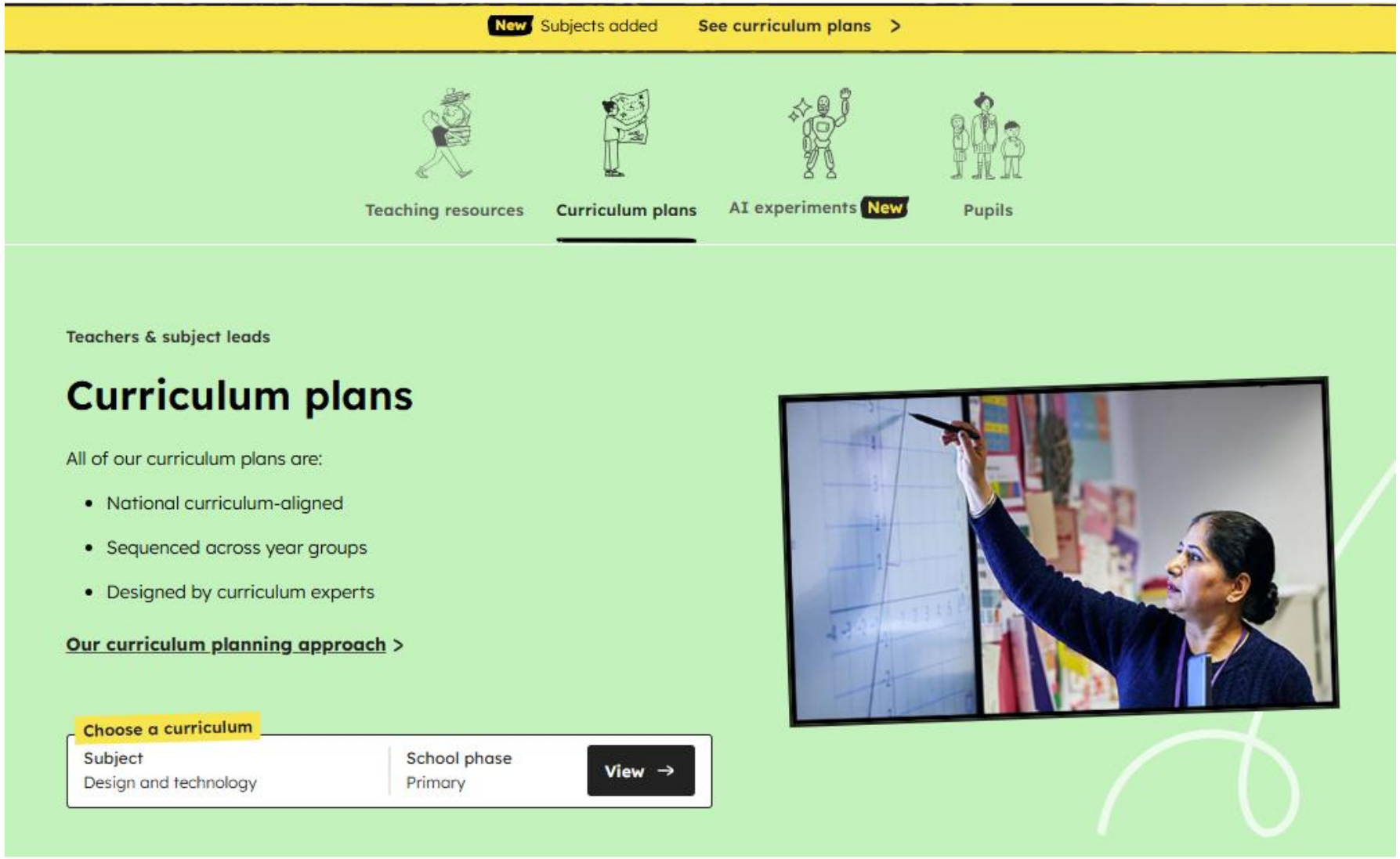
# Oak Academy threads

- Critique and evaluate
- Design
- Make
- Materials
- Sustainability and climate change
- Systems
- User-centred design
- (Cooking and nutrition is separate)

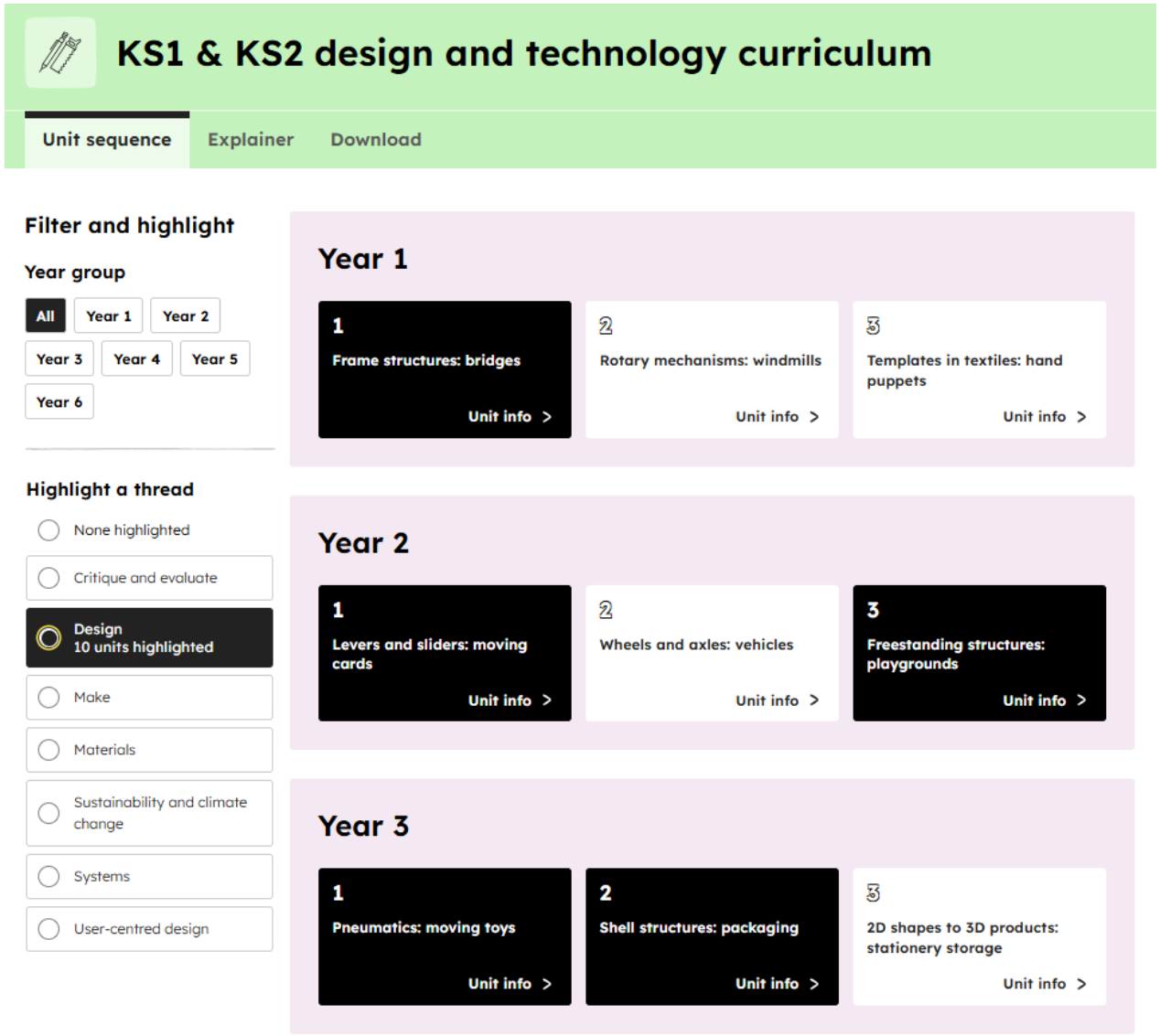
# Oak Academy threads

## How to use threads

1. Familiarise yourself with all of the threads relating to the subject
2. Identify the unit you will be delivering
3. Review the threads associated with the unit
4. Audit where pupils have and will learn about these threads in your existing curriculum sequence.
5. Ensure you understand how the thread relating to your new unit has been framed in prior and future units
6. Review how the thread works within the unit you will be delivering
7. Teach and iterate your framing of the thread within the unit and across your curriculum sequence




https://www.thenational.academy/curriculum




https://www.thenational.academy/curriculum



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EYFS Primary Secondary Assessment Subject CPD

# Primary EYFS, KS1 & KS2 Design and Technology Schemes of Work & Planning

Design & Technology is often one of those subjects that can get left behind in timetabling. We hope to change this by listing every design & technology scheme of work for the English National Primary Curriculum. Whether you're planning to teach D&T in a week-long block or timetable it for weekly, we've compared over ten different schemes with different approaches and topics. Some of the schemes of work below are also available to buy on a unit basis, rather than subscription. Make sure to click on each of the publishers' websites to learn more.

Scheme Support is a member of the Amazon Associate programme. We receive a small affiliate revenue from any Amazon product link you purchase from below. This revenue goes towards supporting the site.

https://www.schemesupport.co.uk/

# Renewed inspection framework – Ofsted

- No routine inspections in Autumn 1
- In use from 10 November 2025
  - Initially with schools that volunteer for inspections
  - Routine inspections begin 1 December
  - No routine inspections week before Christmas

*Government press release 10/9/2025*

# Evaluation areas

- Safeguarding – met/not met
- **Inclusion**
- **Curriculum and teaching**
- **Achievement**
- Attendance and behaviour
- Personal development and well-being
- **Early years**
- Leadership and governance

# Grading

- Urgent improvement
- Needs attention
- Expected standard
- Strong standard
- Exceptional

- Safeguarding – met/not met

# State funded school inspection toolkit – Ofsted

## School and subject curriculum

**In gathering evidence about the curriculum (including subject curriculums), inspectors consider the extent to which:**

- the curriculum is coherently planned and sequenced so that pupils build knowledge and skills sequentially and cumulatively
- time is available within the curriculum for revisiting content and dealing with gaps in knowledge and skills
- the curriculum has subject-specific rigour, so that pupils gain disciplinary knowledge and can answer subject-specific questions
- leaders and teachers have a sophisticated understanding of the differences between subjects; this informs teachers' choices and helps leaders precisely evaluate quality and take targeted actions for improvement
- decisions about the curriculum are refined over time, based on evidence and insight from within and beyond the school

# State funded school inspection toolkit – Ofsted

**In gathering evidence about the curriculum in early years, inspectors consider the extent to which:**

- the curriculum supports all children's progress through the EYFS educational programmes, appropriate to their age and stage of development; it clearly identifies the foundational knowledge and skills that children need for later learning, and emphasises children's communication and language development
- the Reception Year curriculum for teaching systematic synthetic phonics, spelling and handwriting is logically sequenced and cumulative
- the mathematics curriculum is designed to develop children's confidence about and use of mathematical vocabulary, and gives them a secure grounding in number, numerical patterns and spatial reasoning

# State funded school inspection toolkit – Ofsted

## Inclusive curriculum and teaching

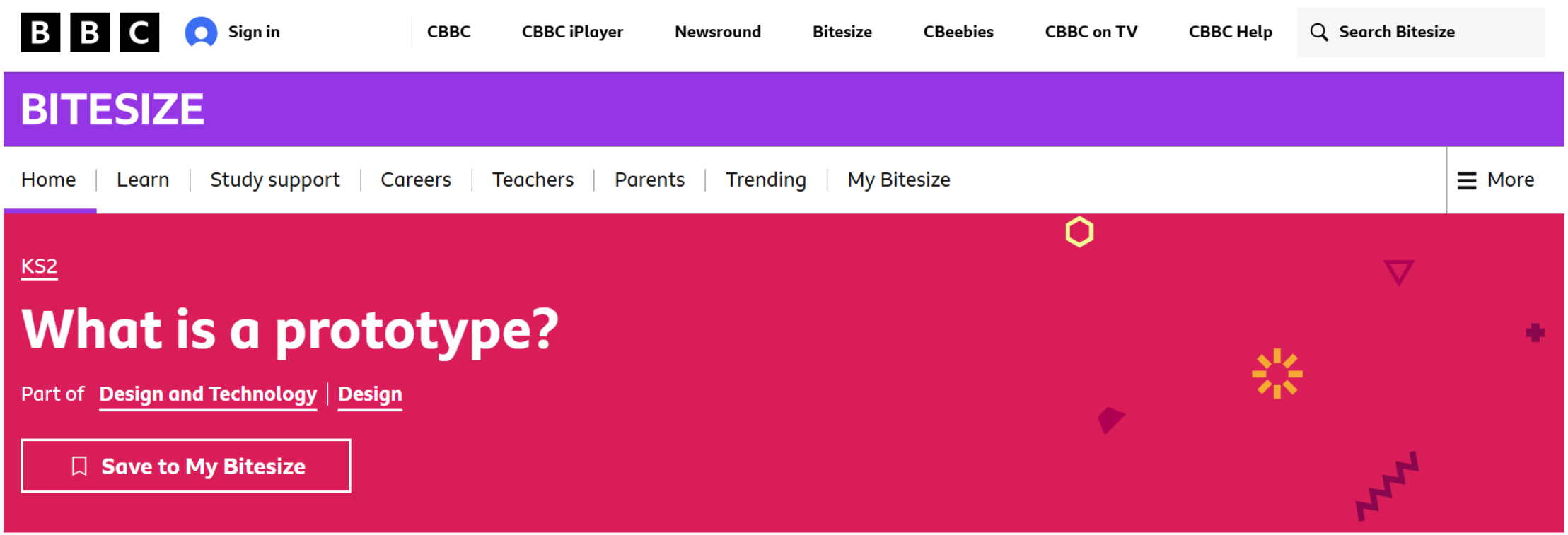
**In gathering evidence about an inclusive curriculum and teaching, inspectors consider the extent to which:**

- staff know how to identify and remove barriers to achievement for their pupils through effective curriculum design, formative assessment and adapting their practice to meet pupils' needs
- the school's approach to the curriculum and teaching draws explicitly on the best available evidence, including high-quality research relating to supporting disadvantaged pupils, those with SEND, those who are known (or previously known) to children's social care, and those who may face other barriers to their learning and/or well-being
- any additional adults in the classroom are deployed to enable all pupils to access high-quality teaching from their class teacher and to develop pupils' independence over time
- reasonable adjustments or adaptations to the curriculum or teaching for specific pupils' needs are well targeted and effective in reducing barriers; adaptations focus on pupils' long-term success rather than short-term fixes; leaders consider the possible downsides of any adaptations and mitigate these

# Making prototypes

Structures and mechanisms

# What is a prototype?




BBC Bitesize

# Things on wheels

# Key vocabulary

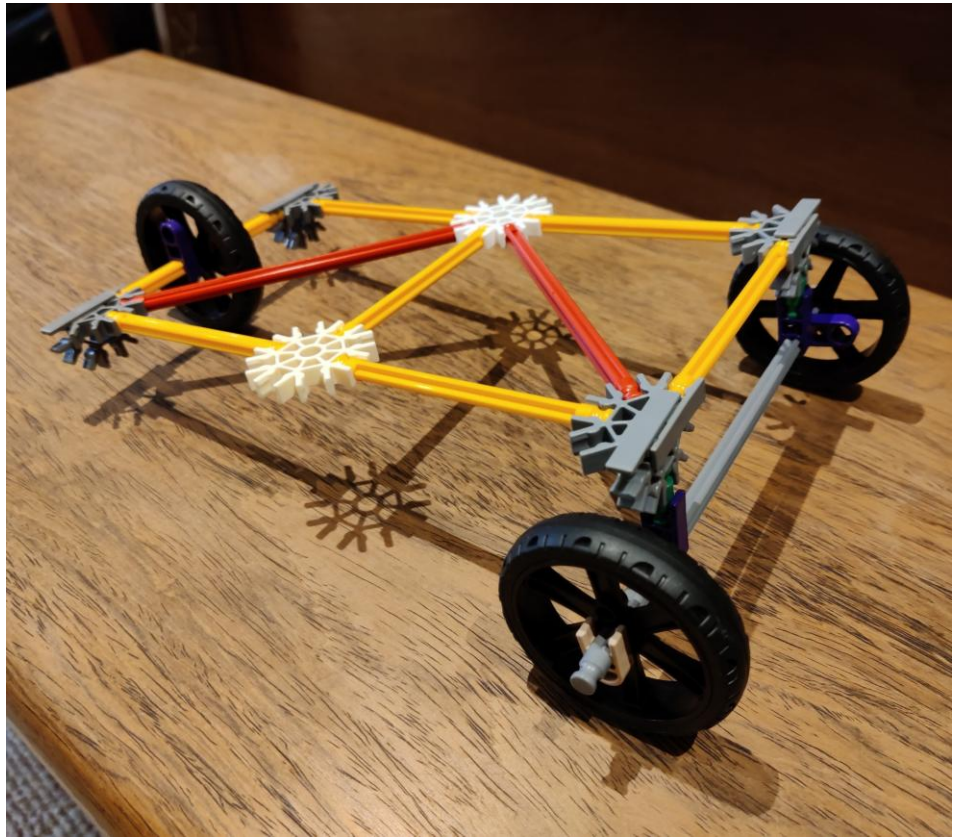
wheel

axle

axle holder

chassis

body

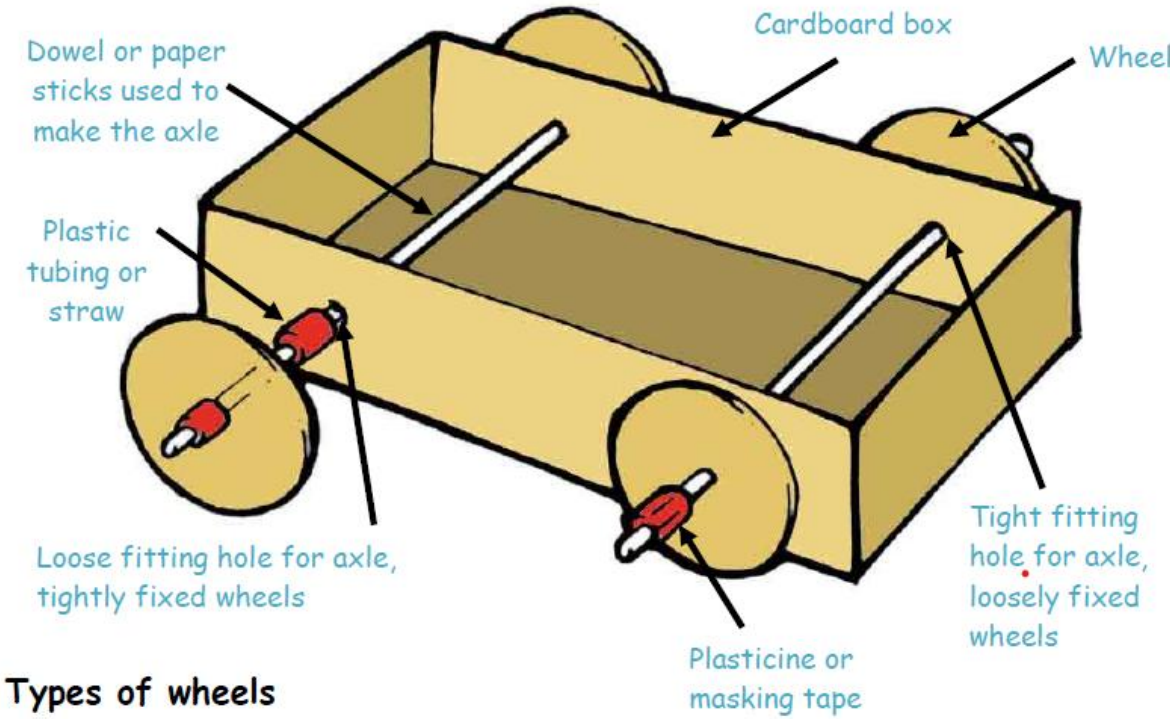


# Axle/Wheel combinations

**Vocabulary**

- Free moving
- Fixed

Example of two different ways to fix wheels




Types of wheels

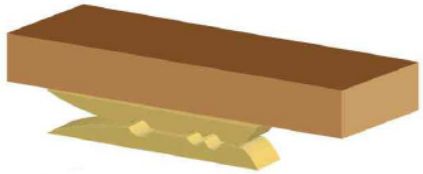
- Free moving axle
- Fixed wheel

- Fixed axle
- Free moving wheel

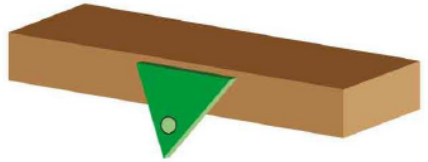
# Axle/Wheel combinations

### Ways to hold free moving axles

**Use pairs of clothes pegs** glued with PVA to the underside of a box.
Check the peg holes are large enough to allow axles to move freely.
Make sure they are aligned carefully so the vehicle moves in a straight line when the wheel and axle mechanism is added.



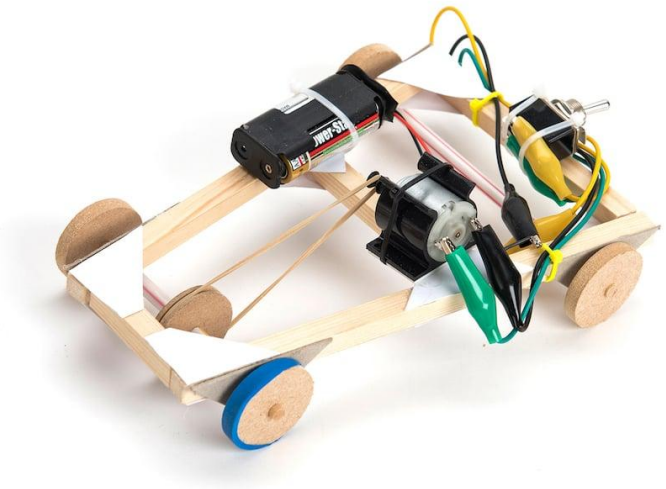
**Use card triangles** with holes for the axle.
Check the holes are large enough to allow the axle to move freely.
Make sure opposite triangles are aligned carefully so the vehicle moves in a straight line when the wheel and axle mechanism is added.



**Use large paper/plastic straws** fixed with masking tape to the underside of a box.
Check straws are positioned carefully so the vehicle will move in a straight line when the wheel and axle mechanisms are added.
Make sure the straw hole is large enough to allow the axle to move freely. The wheels must be fixed tightly to the axle.

# Taking it further

## Electric buggies



## Monitoring, programming and controlling

- Micro:bit
- Crumble

# Focused tasks

- Using corrugated card
- Wheel/Axle combinations
- Making wheels

# State funded school inspection toolkit - Ofsted

## Curriculum and teaching

This evaluation area considers whether:

- leaders design a high-quality, ambitious curriculum for all pupils (the intent), paying particular regard to disadvantaged pupils, those with SEND, those who are known (or previously known) to children's social care, and those who may face other barriers to their learning and/or well-being
- leaders and staff deliver the curriculum effectively (the implementation) across all subjects, year groups and key stages
- leaders make sure that pupils build strong foundations for accessing the curriculum and for later success, including academic achievement, good health and well-being

# Feedback and evaluation

1. What were the main learning points for you today?
2. What impact will today have on you or your school?
3. What further support do you need?